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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/573,767

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Martin Hagg

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EXAMINER

HAMO, PATRICK

ART UNIT

PAPER NUMBER

3746

MAIL DATE

DELIVERY MODE

12/24/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/573,767	Applicant(s) HAGG ET AL.	
	Examiner PATRICK HAMO	Art Unit 3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 July 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is in response to amendments filed on July 14, 2009.

Drawings

The replacement drawings received on July 14, 2009 are acknowledged.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rene, FR 2,722,840.

In regard to claim 1, Rene discloses a transport device for pumping from a source 21 to a consumer 29, comprising a pump 1a with conduits 19a and valves 25a, 27a for connecting the pump to the source and to the consumer, and drive means 3a driving the pump such that the suction cycle is shorter than the output cycle (see fig. 2) and that the output pressure is substantially constant (see Abstract). Rene does not explicitly disclose the consumer to which the pumps deliver, but it would have been obvious to a person having ordinary skill in the art that the pipes 29 would deliver to at least some use that could reasonably be

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interpreted as a consumer, in the implicit teaching of Rene that the pumps are used to supply a constant flow of concrete.

In regard to claim 3, Rene discloses two sets of piston/cylinder units 1a, b, defining first and second pump chambers 17a, b, such that both pump chambers have a short suction cycle than output cycle (see fig. 2).

In regard to claim 4, there is at least a brief overlap of output cycles (see fig. 2).

Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rene in view of Moutafis et al., US 6,216,573.

Rene discloses all of the limitations substantially as claimed except for a pump releasably connected to a drive means and a portion of the pump system being disposable. However, Moutafis teaches a pump system wherein the pump is easily disengaged from the drive means and that pump itself is a disposable unit (see Abstract). It would have been obvious to one of ordinary skill in the art to have modified the drive system of Rene with that of Moutafis to ensure that the system was free from contamination.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rene in view of Ishimoto, US 2003/0012660.

Rene discloses all of the limitations substantially as claimed except for the drive means comprising a single controllable drive motor with gear mechanisms connected to the drive motor and a gear-train output for each pump. However,

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Ishimoto teaches a single drive motor 3 attached to gear mechanism 41 that controls plural pump systems by way of cams 13, 14. It would have been obvious to one of ordinary skill in the art to modify the control system of Rene with the cam system of Ishimoto to simplify the phase control of the pump displacement.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murali.

In Murali, the drive means and pump means are not disclosed as being integral. Even if they were, it would be obvious to one of ordinary skill in the art to make the integral drive means separable. See MPEP 2144.04(5)(c).

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murali in view of Ishimoto, US 2003/0012660.

Murali discloses all of the limitations substantially as claimed except for the drive means comprising a single controllable drive motor with gear mechanisms connected to the drive motor and a gear-train output for each pump. However, Ishimoto teaches a single drive motor 3 attached to gear mechanism 41 that controls plural pump systems by way of cams 13, 14. It would have been obvious to one of ordinary skill in the art to modify the control system of Rene with the cam system of Ishimoto to simplify the phase control of the pump displacement.

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Claims 2, 8, 10, 11, 14-25 and 27-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rene in view Murali of Atkinson, US 4,635,621.

Rene discloses a transport device for pumping from a source 21 to a consumer 29, comprising a pump 1a with conduits 19a and valves 25a, 27a for connecting the pump to the source and to the consumer, and drive means 3a driving the pump such that the suction cycle is shorter than the output cycle (see fig. 2) and that the output pressure is substantially constant (see Abstract). Rene does not explicitly disclose the consumer to which the pumps deliver, but it would have been obvious to a person having ordinary skill in the art that the pipes 29 would deliver to at least some use that could reasonably be interpreted as a consumer, in the implicit teaching of Rene that the pumps are used to supply a constant flow of concrete. Rene does not teach, among other limitations, that the suction and output cycles overlap. However, Murali discloses a transport device for pumping from a source to a consumer, comprising a pump that defines four sets of pump chambers 16a-d, with suction cycles for drawing in fluid and output cycles for discharging fluid (see Abstract), conduit means communicating to valves 48a-d, 50a-d and drive means 18a-d connected such that suction and output cycles overlap (see Abstract). It would have been obvious to a person having ordinary skill in the art to have modified the pump of Rene with the multiple cylinder pump of Murali with overlap of suction and output cycles so as to produce an even more constant pressure flow. Neither Rene nor Murali teach that the pump is releasably connected to the drive means and the pump and conduits, together with the valve means, being constructed as a disposable unit.

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However, Atkinson teaches a replacable pump unit where the drive means 53 is housed separately from the pump means 51, which is constructed integrally with conduits 19, 21 and valves (such as valves 171, 173, fig. 4) so that they can all be easily removed and disposed of in case of contamination while preserving the drive means 53. It would have been obvious to a person having ordinary skill in the art to have applied the improvement of Atkinson whereby those elements that come in contact with the pumped fluid may be disposed of while preserving elements that make no contact, to the pumps of Rene in view of Murali.

Rene further teaches two sets of piston/cylinder units 1a, b, defining first and second pump chambers 17a, b, such that both pump chambers have a short suction cycle than output cycle (see fig. 2), and there is at least a brief overlap of output cycles (see fig. 2).

Murali further teaches that each drive means 18a-d is a separate, controllable hydraulic drive motor and that the output cycles of pumps connected to drives 18b and 18c overlap.

Claims 26 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claims 19 and 27 above in view of Ishimoto, US 2003/0012660.

The references as applied to claims 19 and 27 above teach all of the limitations substantially as claimed except for the drive means comprising a single controllable drive motor with gear mechanisms connected to the drive motor and a gear-train output for each pump. However, Ishimoto teaches a

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single drive motor 3 attached to gear mechanism 41 that controls plural pump systems by way of cams 13, 14. It would have been obvious to one of ordinary skill in the art to modify the control system of Rene with the cam system of Ishimoto to simplify the phase control of the pump displacement.

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PATRICK HAMO whose telephone number is (571)272-3492. The examiner can normally be reached on M-F 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on 571-272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Devon C Kramer/
Supervisory Patent Examiner, Art
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